Abhrajyoti Kundu
Computer Science & IT (CS)

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COMPUTER NETWORKS-2 (GATE 2023) - REPORTS

OVERALL ANALYSIS | COMPARISON REPORT | SOLUTION REPORT

ALL(17) | CORRECT(12) | INCORRECT(5) | SKIPPED(0)

Q. 1 Solution Video | Have any Doubt ?

Which of the following identifiers used to distinguish fragment, process, byte in a segment?

A. Sequence number, IP address, port number

B. Identification number, port address, MAC address

C. Identification number, port address, sequence number — Your answer is **Correct**

Solution :
(c)
Fragments belonging to same packet will have same identification number.
Port address is used to identify process in network.
Segment is group of bytes. Each byte in segment is uniquely distinguished by sequence number.

D. Sequence number, TTL, IP address

QUESTION ANALYTICS +

Q. 2 Solution Video | Have any Doubt ?

Supernet mask of class C is given 255.255.224.0 The number of networks that can be joined are

A. 16

B. 32 — Your answer is **Correct**

Solution :
(b)
255.255.224.0
11111111 11111111 11100000 00000000
In this network bits of 24, some of bits are borrowed from network portion i.e. 5 bits.
These 5 bits are known as supernet bits.
With 5 bits, 32 networks can be joined.

C. 64

D. None of these

QUESTION ANALYTICS +

Q. 3 Solution Video | Have any Doubt ?

Which of following is true in case of ICMP protocol?

A. Parameter problem message is transmitted by ICMP, when a router is congested.

B. When noise has modified some IP header bits, then calculated IP header checksum will not be equal to received header checksum, then source quench message will be transmitted

C. No ICMP error message will be transmitted for the loop back address packet, if it is lost. — Your answer is **Correct**

Solution :
(c)
No ICMP message will be transmitted for 127.0.0.1 message if it is lost
Source quench message is transmitted when the router is congested.

D. None of these

QUESTION ANALYTICS +

Q. 4 Solution Video Have any Doubt ?

Which of following can be first address of block, if block contains 2^{23} addresses?

A 16.64.0.0

B 16.128.128.0

C 16.128.0.0 Your answer is Correct

Solution :
(c)
The first address of a block should be exactly divisible by no of addresses of a block 223 is 128 × 256 × 256.
So second octet possibilities are 0, 128.
Third octet possibilities are 0.
Fourth octet possibilities are 0.

D None of these

QUESTION ANALYTICS +

Q. 5 Solution Video Have any Doubt ?

The following binary number of first octet of IP address is given as 10110111. What are the decimal and hexadecimal equivalents?

A 69/0x2102

B 183/B7 Your answer is Correct

Solution :
(b)
10110111
1011 = B
0111 = 7
Hexadecimal representation is B7.
Decimal representation is 183.

C 173/A6

D 83/0xC5

QUESTION ANALYTICS +

Q. 6 Solution Video Have any Doubt ?

Given window size parameter of TCP header is given as 1111111111111110.
No window scaling factor is applied in options and padding. Calculate the segment size of TCP _____ bytes.

65534 Correct Option

Solution :
65534
When all 16 bits becomes all ones is 65535 bytes.
Then all 15 ones followed by 0 is 65534 bytes.

Your Answer is 20

QUESTION ANALYTICS +

Q. 7 Solution Video Have any Doubt ?

Given HLEN of IP protocol = 1100, total length of IP protocol = 1111111111111111 bits.
Then payload value of packet is _____ bytes.

65487 — Your answer is Correct65487

Solution :
65487

$$1100 = 12 \text{ rows } 12 \times 4 = 48 \text{ bytes}$$
$$1111111111111111 = 65535 \text{ bytes}$$
$$\text{Header size + Payload} = \text{Packet size}$$
$$\text{So, Payload value} = 65487 \text{ bytes}$$

QUESTION ANALYTICS +

Q. 8 Solution Video | Have any Doubt ?

Which of following is true in case of time wait timer of TCP?

A. To overcome deadlock between client and server process. — Your answer is IN-CORRECT

B. To stop new connection during this time. — Your option is Correct

C. To stop malicious requests during this time. — Your option is Correct

D. None of these

YOUR ANSWER - a,b,c | CORRECT ANSWER - b,c | STATUS - ✗

Solution :
(b, c)
Purpose of persistence timer is to overcome deadlock between two processes from client to server After receiving FIN segment from server, no other new connections will be established during this TIME WAIT time and attacker cannot impersonate and entire data during this time.

QUESTION ANALYTICS +

Q. 9 Solution Video | Have any Doubt ?

Which of following is true in case of transport layer protocols?

A. Maximum segment size as per RFC standard is $2^{16} \times 2^{14}$. — Your option is Correct

B. Segmentation is done when transport layer is giving data to network layer. — Your option is Correct

C. TCP is connectionless service.

D. None of these

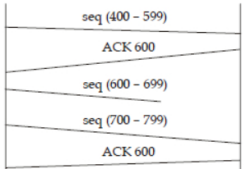
YOUR ANSWER - a,b | CORRECT ANSWER - a,b | STATUS - ✓

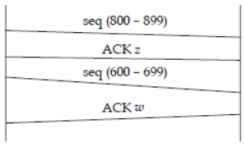
Solution :
(a, b)
As per request for comment standard, the maximum window size can be used in TCP is $2^{16} \times 2^{14}$.
Segmentation is done at interface, when transport layer is giving data to network layer.

QUESTION ANALYTICS +

Q. 10 Solution Video | Have any Doubt ?

segments are transmitted from client TCP to server TCP. Calculate z, w values of acknowledgments transmitted by server TCP to client TCP?





A 900, 700

B 600, 900 Your answer is **Correct**

Solution :
(b)
TCP can accept out of order segments but always sends in order acknowledgments.
When segment 800 is received, then still duplicate ACK is received ACK 600.
When segment 600 is retransmitted, the final ACK is 900.
So option (b) is answer.

C 900, 900

D None of these

QUESTION ANALYTICS +